General Information				
Academic subject		Ecophysiology and control of food -related microorganisms (6 ECTS) (I.C. Biology and ecophysiology of food -related microorganisms))		
Degree course	Bachelor programme: Food Science and Technology			
ECTS credits	6 ECTS			
Compulsory attendance	No			
Teaching language	Italiano			
Subject teacher	Name Surname	Mail address	SSD	
	Maria Calasso	maria.calasso@uniba.it	AGR/16	
			7.0, 20	
ECTS credits details				
Basic teaching activities	4 ECTS Lectures	4 ECTS Lectures 2 ECTS Laboratory or field class		
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Class schedule				
Period	II semester			
Course year	Second			
Type of class	Lecture- workshop	DS		
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Time management				
Hours	150			
In-class study hours	60			
Out-of-class study hours	90			
out or class stady from s	30			
Academic calendar				
Class begins	1 st March, 2022			
Class ends	June 17 th , 2022			
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Syllabus				
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Contents	Microbial cell physiology and microbial growth in response to environmental parameters. Outlines of environmental adaptation. Food-related microorganisms: meat, poultry, eggs, fish, milk and dairy products, fresh and fermented vegetables. Basic methods for determining microbial cell density in food. Control of microbial cell numbers in food: chemicals, radiations, low temperatures, high temperatures, drying.
C	Principles of HACCP.
Course program	
Reference books	 Lecture notes and educational supplies provided during the course Lecture notes and educational supplies will be provided by means of online platforms (i.e.: Edmodo) Brock; Madigan; Martinko. Brock Biologia dei Microrganismi 1, 2. Casa Editrice Ambrosiana (2007). Farris, Gobbetti, Neviani, Vincenzini. Microbiologia dei prodotti alimentari. Casa Editrice Ambrosiana (2012). Gobbetti M. e Corsetti A. Biotecnologie dei prodotti lievitati da forno. Casa Editrice Ambrosiana (2010). Jay, J.M. (Ed.). Modern Food Microbiology. 5a ed. London:
	Chapman & Hall International Thomson Publishing (1997).
Notes	
Evaluation methods	Lectures will be presented through PC assisted tools (PowerPoint, video). Field and laboratory classes, reading of regulations, will be experienced Lecture notes and educational supplies will be provided by means of a mailing list or online platforms (i.e.: Edmodo, Google Drive) The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the laboratory/production plants, as reported in the Academic Regulations for the Bachelor Degree in Food Science and Technology (article 9) and in the study plan (Annex A). Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year. The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex B of the Academic Regulations for the Bachelor Degree in Food Science and Technology. Non-Italian students may be examined in English language, according to the aforesaid procedures.
Evaluation criteria	 Knowledge and understanding Describing microbial cell physiology and microbial growth in response to environmental parameters Describing spoilage and pathogenic microorganisms in vegetable- and animal-derived food Applying knowledge and understanding Describing the main methods for determination and control of microbial cell densities in food Making informed judgements and choices Expressing reasonable hypotheses about solutions to control microbial cell densities in laboratories wherein food-related microorganisms are cultivated Communicating knowledge and understanding

in response to environmental parameters stinue learning ing reasonable hypotheses about use of starter and nitoring of spoilage and pathogenic microrganisms in vegetable- and animal-derived food
Thursday 9.00 a.m. – 17.30 p.m. by appointment
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